

In the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the Application.

Listing of Claims:

1. (Currently amended) In a data storage environment having a server, a first and second data storage volume, and production data being stored on the first data storage volume, and a copy of the production data, denominated as the data copy, being stored on the second data storage volume, a method, operable on a computer system, of handling updates to the data copy when the environment is configured for processing incremental updates to the data copy, the method comprising the steps of:

protecting the data copy from being written over until the update to the copy of production data is performed;

(a) responsive to the start of a full ~~non-incremental~~ update to the copy of the production data, not marking the state of the production data as being ready for being copied;

(b) updating a session associated with the data copy as being in an inconsistent state with the data copy; and

(e) completing the update to the copy of production data.

2. (Cancelled)

3. (Original) The method of claim 1, wherein the session is associated with a tracking data structure.

4. (Currently amended) The method of claim ~~[[2]]~~ 3, wherein ~~the session is associated with a tracking data structure and a transfer data structure is associated with the step of preparing to transfer~~ transferring data.

5. (Currently amended) The method of claim 1, wherein the environment includes a first and second data storage system and the first data storage volume is stored on the first data storage system and second data storage volume is stored on the second data storage system.
~~volumes are each on different data storage systems from each other.~~

6. (Cancelled)

7. (Cancelled)

8. (Cancelled)

9. (Currently amended) A system for handling updates to the data copy when the environment is configured for processing incremental updates to the data copy, the system comprising:

a first data storage volume having production data stored thereon ~~on it~~;

a second data storage volume in communication with the first data storage system, and having a copy of the production data, denominated as the data copy, on the first data volume;

a server in communication with the first data storage volume;

computer-executable program logic configured in relationship to the first and second data storage volume and the server for causing the following computer-executed steps to occur:

protecting the data copy from being written over until the update to the copy of production data is performed;

(a) responsive to the start of a full ~~non-incremental~~ update to the copy of the production data, not marking the state of the production data as being ready for being copied;

(b) updating a session associated with the data copy as being in an inconsistent state with the data copy; and

(e) completing the update to the copy of production data.

10. (Cancelled)

11. (Original) The system of claim 9, wherein the session is associated with a tracking data structure.

12. (Currently amended) The system of claim ~~[[10]]~~ 11, wherein ~~the session is associated with a tracking data structure and~~ a transfer data structure is associated with the step of preparing to transfer transferring data.

13. (Cancelled)

14. (Cancelled)

15. (Cancelled)

16. (Currently amended) The system of claim ~~[[15]]~~ 9, wherein the environment includes a first and second data storage system and the first data storage volume is stored on the first data storage system and second data storage volume is stored on the second data storage system.
~~volumes are each on different data storage systems from each other.~~

17. (Currently amended) A program product for use in a data storage environment and being for handling ~~periodic~~ updates to a copy of production data, wherein the data storage environment includes:

a first data storage volume having production data stored thereon ~~on it~~;

a second data storage volume in communication with the first data storage volume ~~system~~, and having a copy of the production data, denominated as the data copy, on the first data storage volume;

a server in communication with the first data storage volume; and

the program product includes computer-executable logic ~~contained on~~ provided by a computer-readable medium and which is configured for causing ~~the following~~ a computer-executed ~~step to occur~~ to execute the steps of:

protecting the data copy from being written over until the update to the copy of production data is performed

(a) responsive to the start of a ~~periodic~~ update to the copy of the data, marking the state of the production data as being ready for being incrementally copied to update the data copy to account for any incremental changes to the production data ~~since either a full copy or a prior incremental copy of the production data was performed~~;

(b) preparing to update the data copy by protecting the production data from being written over until an incremental copy operation is performed;

(c) updating the data copy in accordance with the incremental copy operation being performed: and

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(d) marking the state of the production data as having been transferred, and
unprotecting the production data thereby allowing it to be written over.